

IN THE CLAIMS

Claims 9-12 and 14-19 are pending.

Claims 1-8, 13, and 20 are canceled.

Claims 9 and 14 are currently amended.

1-8. (Canceled).

9. (Currently Amended) A host bus adapter for managing failover and failback processes within a data storage system having a host server, a communication fabric, at least one active storage controller, and at least one standby storage controller, comprising:

a connector linking the host bus adapter to a processor of the host server;

a port linking the host bus adapter to the communication fabric configured for transmitting and receiving digital information; and

a failover mechanism detecting a redundancy failure in the data storage system and in response, initiating failover actions,

wherein the failover mechanism presents a single logical unit number (LUN) entity to operating system device drivers in the host processor that is discoverable a plurality of times and wherein the failover actions are initiated without prior communication with the host processor.

10. (Original) The host bus adapter of Claim 9, wherein the failover actions are selected by the failover mechanism from a failover rule set.

11. **(Original)** The host bus adapter of Claim 10, wherein the failover mechanism is further configured to determine at the time of the detecting, operating conditions within the data storage system, to determine whether the operating conditions match a set of failover conditions, and if matching, to select the failover action corresponding to the operating conditions.

12. **(Original)** The host bus adapter of Claim 11, wherein the failover conditions are specific to the detected redundancy failure.

13. **(Canceled).**

14. **(Currently Amended)** A data storage system with redundant data storage, comprising:

- a host computer device with a processor running operating system device drivers;
- a communication fabric for carrying digital data signals;
- an active controller controlling access by the host computer device to data storage devices;
- a standby controller controlling access by the host computer device to the data storage devices; and
- a host bus adapter linked to the host processor and the communication fabric for selecting a path through the communication fabric to one of the active and standby controllers for providing the operating system device drivers with access to the data storage devices.

wherein the host bus adapter is configured to initiate a failover action selected from a set of failover actions, wherein the host bus adapter presents a single logical unit number (LUN) entity to each of the operating system device drivers that is discoverable multiple times.

15. (Original) The system of Claim 14, wherein the host bus adapter detects a potential failure in redundancy and determines whether to initiate the failover action by determining whether failover operating circumstances and failover operating conditions for the potential failure are satisfied.

16. (Original) The system of Claim 15, wherein the failover operating circumstances require when an active path in the communication fabric fails that at least one path to the controllers is available and that a path to the standby controller is usable.

17. (Original) The system of Claim 15, wherein the initiated failover action is selected from the set of failover actions based on existing ones of the failover operating conditions.

18. (Original) The system of Claim 14, wherein the data storage devices are grouped into subsets and wherein the host bus adapter is configured to perform the failover action for the subsets when a particular storage device within the subset requires the failover action.

19. **(Original)** The system of Claim 14, wherein the host bus adapter is adapted to initiate failover actions for a particular one or group of the data storage devices less than a preset number of times per monitoring interval.

20. **(Canceled).**